



Updated 23 March, 2020, Jens G. Hansen

Crop rotation

A crop rotation shorter than 1:3 will increase the risk of early infection sources caused by dumps, volunteers and oospores. This will on average result in an earlier start of the late blight epidemic. It is very difficult to quantify the effect of rotation on late blight. In other words: it is difficult to say what the benefit is for a late blight control strategy of a 1:3 rotation compared to a 1:2 rotation.

An analysis of first outbreaks in Denmark showed that late blight occurred earlier in fields with shorter rotations (Bødker et al., 2006). A survey of early outbreaks in The Netherlands showed also a tendency for earlier outbreaks in fields with shorter rotations (Evenhuis et al., 2007). The rotation in starch potatoes (1:2) is shorter compared to ware and seed potatoes (1:3 & 1:4) and the rotation in organic potatoes is even longer (1:5 or 1:6). In France, the recommended rotation for IPM grown potatoes is 1:3. We assume that the rotation in general only moderately influences the fungicide input, except if you have narrow crop rotations and risk of infections from oospores.

Literature

Bødker, L., Pedersen, H., Kristensen, K., Møller, L., Lehtinen, A. & A. Hannukkala. 2006. Influence of crop history of potato on early occurrence and disease severity of potato late blight caused by *Phytophthora infestans*. PPO Special Report No. 11,: 53-56.

Evenhuis, A., Turkensteen, L.J., Raatjes, P. & W.G. Flier. 2007. Monitoring primary sources of inoculum of *Phytophthora infestans* in The Netherlands. PPO Special Report No. 12: 357-364.